



LOWER Key Stage 2 - SCIENCE

Lesson title – *Edible Plants*

Time of year – all year - but most flowers are in bloom in spring & summer

Curriculum topic – Science

Focus of learning objectives

Flowering plants in the Kitchen Garden and their role in food production

Curriculum objectives

- To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers;
- Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant;
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Key vocabulary

Life cycle, plant structure, seed dispersal.

Additional Curriculum links

Art

Resources required

What we will provide: Sketch map of the Kitchen Garden

What you should bring:

- Drawing materials
- Clip boards
- Magnifying glasses

Preparation required

- Read the **Self-led Teaching Resource – Introduction to the Kitchen Garden**

Other relevant information

Introduction to activities

20 minutes

- Explore the Kitchen Garden and look at the fruit/vegetables in the garden and list them. You can use the sheets that list plants grown in the Kitchen Garden to help you. Do any of the plants have flowers?



- Discuss which part of the plant we eat. Roots, stem/trunk, leaves and flowers or a combination of these.

Activities in the Kitchen Garden

90 minutes

Activity 1 Plant life cycles

- Look for different stages of the life cycle of plants in the Kitchen Gardens – seeds, young plants, mature plants, and fruit.
- Discuss similarities and differences between plants. Look at fruit bushes or trees as well as vegetables.

Take note of any pollinating insects.

Activity 2 Exploring plant structure

Choose a plant and make a drawing of it.

- Label the different part of the plant identifying each structure for that plant.
- Include flowers or seeds in the drawing? Identify which part of the plant we traditionally eat.
- Discuss what the plants need for growth of the plant and how the Kitchen Garden been designed to accommodate these requirements. For example, how are they watered?

Activity 3 Flowers close up

- Using a magnifying glass, examine the structure of a flower and draw a picture of it.
- Watch to see if there are any pollinating insects. What are they?
- Watch to see how they pollinate the plant. Include the pollinating insect in the diagram.

Activity 4 Scattering Seeds

- Think about how the seeds will be dispersed? Choose a plant and draw the lifecycle showing seed dispersal.

Extension Activity

10 minutes

There are five main modes of seed dispersal: gravity, wind, ballistic, water, and by animals.

- Go for a walk and write a list of fruit and vegetables and identify which category of seed dispersal each plant fit into.
- There may be more than one e.g. apples or figs are heavy so fall to the ground where animals eat the fruit and scatter seeds. The seed may take root near the mother plant if the fruit rots.
- Make a tally show to show your results. E.g.

Gravity	Wind	Ballistic	Water	Animals
● IIII	III	IIII	II	I

Health and Wellbeing focus

15 minutes

- Discuss how the Kitchen Garden staff are caring for the environment by 'caring' for plants and creating habitats and how that benefit wildlife as well as people.
- Discuss how caring for the environment benefits our wellbeing.
- Identify some ways that you could care for the environment at home and at school e.g. recycling food waste to create compost or planting a pollination station in a plant pot.



- What do humans need to stay healthy?

Food growing focus

30 minutes

- Discuss the role of fruit and vegetables in healthy eating.
- Draw a picture of the fruit that you have seen in the style of a botanical drawing. Include the seeds if appropriate.
- If you would like to pick fruit for your class to taste, please ask the learning team in advance what you can pick to try on the day of your visit. You are welcome to collect any fallen fruit for your use.
- Taste some fallen fruit and think of a word to describe it. Each person must have a different word. Write your word next to picture.

Extension activity at school

- Design a Kitchen Garden which includes all the requirements for plants.
- Grow a mini garden in a container such as a window box. Keep a record of progress and make observational drawings. Collect seed for use in future years. Try to use recycled / natural material e.g. recycled plastic bottles for cloche or sticks for peas to grow up.